



General Fusion Inc.

Position: Senior Specialist in Computational Fluid Dynamics

Location: Burnaby, BC, Canada

General Fusion Inc. is pursuing a faster and more practical path to commercial fusion energy. Fusion is a clean, safe, abundant and on-demand form of energy that when harnessed, could provide a nearly unlimited source of power with zero CO₂ emissions. Backed by over \$100 million in funding from a world class investor syndicate, the company's goal is to transform the world's energy supply and enable clean energy, everywhere, forever.

General Fusion is currently in the pre-conceptual engineering design phase. General Fusion's technology is based on the compression of magnetized plasma targets using liquid metal liners. We are seeking a qualified candidate to assist in the modeling of the liquid metal compression system.

This job involves cutting edge science, and many aspects of this work are not well understood or studied. There is significant opportunity for discovery.

Key Responsibilities:

The primary role will be to develop relevant and accurate CFD models to assist with design and construction for a variety of components related to liquid metal plasma compression systems.

This role also will involve post processing modeling results and communicating them to the team in a clear and concise manner. This also requires soliciting and following up on technical feedback.

You will work closely with the engineering and science teams to determine component interactions, governing physics, and desired results. This involves taking ownership of the modeling results, ensuring that they meet the needs, in both fidelity, and confidence of the engineering team. Owning the results also means actively perusing experimental physical results, reconciling them with model outputs, and using them to better the fidelity of the models.

General Fusion is continuously expanding its simulation capabilities. A part of this role will be the evaluation of new techniques, software, and computer resources.

This is a technical position that includes both: performing engineering CFD simulations in a timely manner; and depending on the expertise of the candidate, the opportunity to participate in R&D work such as code development, fundamental research, massively parallel simulations, and advanced post processing.

Work Experience / Educational Requirements:

- A positive attitude and the ability to work in a fast paced environment.
- Degree(s) in Mechanical/Aerospace Engineering, Engineering Physics, Fluid mechanics, or computational sciences.

- Strong experience with one or more of the following commercial codes: Fluent, CFX, OpenFOAM.
- Strong understanding of CFD principles and the ability to apply them to practical problems.
- Strong background in fluid mechanics and heat transfer.
- Demonstrated experience doing CFD calculations, preferably in industry.
- Experience with Linux/Unix.
- Experience running and post processing simulations on medium and large parallel computers would be an asset.
- Working with scalable cloud computing resources, such as AWS or Azure for HPC applications would also be a significant asset.
- Experience with optimization techniques would also be an asset.
- The ability to be an independent CFD resource on a multi-disciplinary team.

The work involved in this project combines a wide range of skill sets, and each team member will need to become familiar with the full scope of the plasma development and understand how their work relates to the whole. General Fusion seeks individuals who are self-motivated, have good communication skills and are comfortable with creative problem solving independently and within a group.

Applications

Please send your resume to opportunities@generalfusion.com noting “Computational Fluid Dynamics” in the email subject line. We thank all applicants for their interest, only those selected for an interview will be contacted.